

Attorney Docket # 4100-339RCE

**MS-AF**  
**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of

Hubert SCHALK et al.

Serial No.: 10/816,524

Filed: April 1, 2004

For: Folding Device with a Folding Drum

Examiner: Desai, Hemant  
Group Art: 3721

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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

SIR:

Applicants request review of the Final Rejection in the above-referenced application. No amendments are being filed with this request.

The review is requested for the reasons set forth on the following pages.

## REMARKS

Claims 1-2, 8 and 14-19 stand rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 1,471,755 ("*Schmidt*") in view of U.S. Patent No. 4,811,688 ("*Turner*"). Claim 5 stands rejected under 35 U.S.C. 103(a) as unpatentable over *Schmidt* in view of *Turner*, and further in view of U.S. Patent No. 6,527,029 ("*Ryser*"). Claims 10-13 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Schmidt* in view of *Turner*, and further in view of U.S. Patent No. 5,118,214 ("*Petrzelka*"). Claim 16 stands rejected under 35 U.S.C. §103(a) as unpatentable over *Schmidt*. Lastly, claims 18-19 stand rejected under 35 U.S.C. §102(b) as anticipated by *Schmidt* in view of *Turner*. For the following reasons, Applicants respectfully assert that all claims of the present application are patentable over the cited reference.

Independent claim 1 recites the limitation "said folding-blade shaft having at least two folding-blade carriers for holding folding blades which are spaced apart from one another in a region proximate said carrier by a distance smaller than 10 millimeters" which was formerly recited in dependent claim 9 (now canceled). Independent claim 14 include the subject matter of canceled claim 9, i.e., "folding blades being spaced apart from one another in a region proximate said carrier by a distance smaller than 10 millimeters".

*Schmidt* discloses a folding mechanism that includes means for effecting a relative change between the sheet path and the folding mechanism as the speed at which the sheets advance may vary. As a result, successive sheets become folded at the same point, such as on a transverse central line, irrespective of their speeds (see pg. 1, col. 1, lines 35-42).

The Examiner (pg. 3) of the Final Office Action concedes that:

Schmidt does not disclose expressly that the folding blades are spaced apart from one another by a distance smaller than 10 millimeters.

However, the Examiner then asserts that:

At the time of the invention, it would have been an obvious matter of design choice to a person of ordinary skill in the art to space folding blades apart by 10 millimeters because to improve the fold quality or to accommodate the change in material characteristics *because since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.* (Emphasis Added)

Applicants respectfully disagree with the Examiner's assertion because (1) *In re Aller* relates to a process claims and (2) it would not be obvious to space the folding blades apart by 10 millimeters based on *Schmidt*.

The Examiner has cited *In re Aller* to provide support for his conclusion that Applicants' claimed limitations constitute nothing more than an obvious design choice. The citation of *In re Aller* is inappropriate, however, because *In re Aller* has nothing to do with determining the patentability of an apparatus claim. Rather, *In re Aller* is directed to determining the patentability of a process claim.

In particular, *In re Aller* is an appeal from a decision of the Board of Appeals of the United States Patent Office, affirming the rejection by the Primary Examiner of appellants' application for a patent, Serial No. 45,326, filed August 20, 1948, for "Decomposition of Organic Peroxides. (See *In re Aller* at pg. 234). The *In re Aller* process involved "the treatment of isopropyl benzene hydroperoxide (or similar organic peroxides) with sulphuric acid, wherein the hydroperoxide is decomposed into phenol and acetone (or other ketones)". (*Id.*)

According to the Court, "[n]ormally, it is to be expected that a change in temperature, or in concentration, or in both, would be an unpatentable modification. Under some circumstances, however, changes such as these may impart patentability to a process if the particular ranges claimed produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art.... Such ranges are termed "critical" ranges, and the applicant has the burden of proving such criticality.... More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation". (See *In re Aller* at pg. 235; citations omitted).

Pursuant to rendering its decision, the Court determined whether there was any difference in kind attributable to appellants' process, and stated that "logically the improvements could flow equally well from the changes in degree resulting from routine variation in temperature or acid concentration". (*Id.*) The Court thus held that the claimed process is merely different in degree and not in kind from the reference process, and that the criticality of the claimed ranges has not been shown and, thus, Affirmed the decision of the Board of Appeals.

Clearly, Applicants claimed invention is directed to an apparatus, whereas *In re Aller* is directed to determining the patentability of a process. Therefore, it is clear that *In re Aller* does not apply with respect to determining patentability of the instant claims.

In any event, the claimed range would not be obvious in view of *Schmidt*. More specifically, the carrier of small material thickness in the longitudinal direction and a large area which extends over the cross section saves weight and permits the spacing of 10 millimeter between folding blades. Paragraph [0008] of the specification as originally filed discloses that, “[i]t is possible to reduce the weight of the entire folding device, preferably the folding drum and/or the folding-blade shaft with the folding-blade carrier, as a result of the at least one further bearing point arranged between the bearings at the two ends, as the forces resulting from the rotation are distributed over at least three bearing points”.

As further described at paragraph [0011] of the specification, “[i]t is significant that the carrier for accommodating the at least one additional bearing in the central region of the folding-blade shaft is firstly configured with a small material thickness in the longitudinal direction of the folding device and ... secondly, however, the carrier is configured with a large area which extends over approximately the entire cross section of the interior of the folding drum in the transverse direction of the folding device, in such a way that the stability and torsional rigidity are ensured despite the small material thickness”. These features of the carrier, i.e., “a small material thickness in the longitudinal direction of the folding device” and “a large area which extends over approximately the entire cross section of the interior of the folding drum”, are recited in independent claim 1 and are not described or taught by *Schmidt*.

An advantage associated with a small material thickness in the longitudinal direction of the folding device is described at paragraph [0012] of the originally filed specification, i.e., “it is possible to arrange the folding blades very close to one another in the region of the carrier, the gap between the folding blades preferably being smaller than 10 millimeters”. Thus, the specification provides a carrier having a small material thickness that would accommodate the at least one additional bearing of the folding-blade shaft pursuant to reducing the weight of the entire claimed folding device and allow a gap between the folding blades smaller than 10 millimeters. *Schmidt* is clearly not concerned with reducing weight since a shaft 38 runs through the entire folding drum and would therefore not permit the claimed gap or motivate one of skill in the art to size the gap as recited in independent claim 1.

It is thus clear that the specification discloses advantages associated with folding blades that are spaced apart from one another in a region proximate said carrier by a distance smaller than 10 millimeters recited in amended claims 1 and 14 that is more than merely a design choice.

*Schmidt* clearly fails to teach or suggest folding blades that are arranged in the manner as recited in independent claims 1 and 14. Therefore, independent claims 1 and 14 are patentable over *Schmidt* for this reason.

The Examiner cites *Turner* in an attempt to cure the shortcomings of *Schmidt*, i.e., self-aligning roller bearings, as recited in independent claim 1. The Examiner cites *Ryser* in an attempt to cure the shortcomings of the combination of *Schmidt* and *Turner*, i.e., a central lubrication system for lubricating bearings, as recited in dependent claim 5. *Petrzelka* has been cited in an attempt to cure the shortcomings of the combination of *Schmidt* and *Turner*, i.e., a drive pinion connected to the folding shaft with a "form-fitting connection". However, each of these references fails to cure the deficiency of the device disclosed in *Schmidt*, because *Turner*, *Ryser* and/or *Petrzelka*, individually or in combination, fail to teach or suggest "folding blades that are spaced apart from one another in a region proximate said carrier by a distance smaller than 10 millimeters," as recited in amended claims 1 and 14. Therefore, independent claims 1 and 14 are patentable over the combination of the cited art.

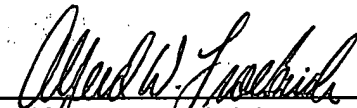
Reconsideration and withdrawal of all the rejections under 35 U.S.C. §102(b) and §103(a) are therefore in order, and a notice to that effect is respectfully requested.

In view of the patentability of independent claims 1 and 14, dependent claims 2, 5, 8, 10-13 and 15-18 are also patentable over the prior art for the reasons set forth above, as well as for the additional recitations contained therein.

Applicant respectfully submits that this application is in condition for allowance, and such action is respectfully requested.

Respectfully submitted,  
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Dated: January 14, 2008